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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,284	12/05/2001	Jung-Hyuk Im	YPL-0024	6641

7590 06/15/2005

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EXAMINER	
PICH, PONNOREAY	

ART UNIT	PAPER NUMBER
2135	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/005,284	IM ET AL.	
	Examiner	Art Unit	
	Ponnoreay Pich	2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-5 have been examined and are pending.

Priority

The examiner recognizes the applicant's right to an effective filing date of 1/5/2001.

Information Disclosure Statement

The examiner has considered the IDS submitted by the applicant.

Specification

1. The abstract of the disclosure is objected to because the text on line 15 should be removed. Correction is required. See MPEP § 608.01(b).
2. Applicant needs to include a cross reference to the related application (from which applicant is claiming priority) in the specification.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(f) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

3. The specification is also objected to because several places in the specification refer to a "recording medium driver"; for example, see page 1, line 5. The examiner believes that this was the result of a bad translation from another language and applicant meant instead to recite "recording medium drive" as seen in Figure 1, item 2.

Claim Objections

Claims 1 and 3 are objected to because of the following informalities: Claims 1 and 3 refer to a "recording medium driver." See comments above in the objection to specification regarding this phrase. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 4, it is unclear what would render logic circuits "relevant."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Mason et al (US 6,158,004).

Claim 1:

Mason discloses an apparatus for securing a recording medium drive, which encrypts data provided from an interface port of a computer main board and inputs the encrypted data to an interface port of the recording medium driver, and decrypts the data provided from an interface port of the recording medium driver and inputs the decrypted data to the interface port of the computer main board (col 2, lines 42-49 and Fig 1 and 4-6), the apparatus comprising:

1. An encrypter for encrypting the data provided from the interface port of the computer main board using a logic circuit and inputting the encrypted data to the interface port of the recording medium driver (col 4, lines 50-58 and col 5, lines 6-12).

2. A decrypter for decrypting the data provided from the interface port of the recording medium driver using a logic circuit and inputting the decrypted data to the interface port of the computer main board (col 4, line 61-col 5, line 12).
3. A memory, i.e. sector buffer, for receiving data to be used for encrypting from a user and providing the received data to the encrypter and the decrypter (Fig 1 and 4-6, item 7).

A memory for receiving data to be used for encrypting from a user and providing the received data to the encrypter and the decrypter also reads on the memory that is inherently present in any computer system; the computer system is the Host Apparatus (item 2 in Figures 1 and 4-6).

Claim 2:

Mason further discloses:

1. A key input interface connected to the memory (col 6, lines 17-21).
2. Wherein, when a user inserts a key of an EEPROM, where the data to be used for encrypting is saved, into the key input interface, the data to be used for encrypting is inputted to the memory (col 5, lines 32-37, 64-67 and col 6, lines 16-20).

Claim Rejections - 35 USC § 103

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mason et al (US 6,158,004) and in view of common knowledge in the art.

Claim 2:

Claim 2 is also rejected in view of common knowledge in the art. The key input interface connected to the memory reads on a keyboard of a computer, which is standard to any computer system. Further, it is well known in the art where a computer is protected by some sort of password and to be able to access the computer and all its devices, a user must enter the correct key or password. This makes obvious the limitation of wherein, when a user inserts a key of an EEPROM, where the data to be used for encrypting is saved, into the key input interface, the data to be used for encrypting is inputted to the memory. In light of this, the limitations recited in claim 2 is obvious and one of ordinary skill would be motivated to incorporate password protection into the computer disclosed by Mason because it would keep the computer secure against unauthorized users.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mason et al (US 6,158,004).

Claim 3:

Manson discloses a method for securing a recording medium drive by encrypting 16-bit data provided from an interface port of a computer main board and inputting the encrypted data into an interface port of the recording medium drive (col 2, lines 42-49; col 3, lines 63-65; and Fig 1 and 4-6). Note ATA technology uses 16-bit data interface.

Manson further discloses saving data to be used for encrypting in a memory (Fig 1 and 4-6, item 7). Manson does not explicitly disclose the data is saved in such a way

that different data can be saved without any identical data. However, if data are different, then when each data is saved, the saved data also won't be identical. Note that the limitation of saving data to be used for encrypting in a memory in such a way that different data can be saved without any identical data also reads on data that must be saved in the memory of the host apparatus or computer disclosed by Manson in Fig 1 and 4-6, item 2.

Manson does not disclose explicitly reading 8-bit data of an address which has the same value as a 4-bit data in a 16-bit data provided from the interface port of the computer main board, from the memory. However, Manson discloses that the user can load a particular encryption key into his invention to be used as the encryption key (col 7, lines 7-11). It is obvious that when a user initiates the command to load an encryption key, one would have to be obtained. Known methods of obtaining an encryption key include using a key generator that would generate a key when needed or fetching a pre-stored key from a database. Since the storage medium disclosed by Manson in Figures 1 and 4-6 communicates with the host apparatus/computer via an ATA interface, any information or instruction packet it receives from the user via the host computer would have to be 16 bits in size. It is obvious then that if a fetch and load key instruction was sent to the medium, part of the instruction must contain an address of where the key is to be loaded. How much of the 16-bit packet to use to define this address is arbitrary and applicant's choice of 4-bit is obvious. The choice of key size is also arbitrary, though there is an inverse relationship between how fast an encryption can be performed with how large a key is. Therefore, applicant's choice of reading an

8-bit data (corresponding to a key) is obvious. Once the load key command is initiated by the user, whether the key is obtained via generation or fetched from storage, the key must be loaded to memory first before it can be transferred to key unit 15 in Figures 4 and 5. The program which initiated the fetch key command will expect the key to be located at a certain place in memory (defined by part of the 16-bit packet), so when the key is fetch/generated, the key would have to be loaded to that particular address in memory so that the program can find the key to load into key unit 15. Therefore, in light of the above, the limitation of reading 8-bit data of an address which has the same value as 4-bit data in 16-bit data provided from the interface port of the computer main board, from the memory is obvious from Manson's teachings. The only things Manson did not explicitly teach were applicant's choices of having 4-bit data represent an address and the data read from the address being 8-bits. However, those bit sizes are arbitrary design choices and the overall technical spirit and structure of applicant's invention still does not patentably distinguish from Manson's invention.

Manson also does not explicitly disclose replacing 8-bit data of the 16-bit data provided from the interface port of the computer main board with the 8-bit data created as a result of a logical operation performed on 8-bit data of the 16-bit data provided from the interface port of the computer main board and the 8 bit data read from the memory. However, Manson teaches that the data received from the host apparatus is encrypted using a key before storage (col 4, lines 50-56 and col 6, lines 22-28). It is obvious that the 8-bit data disclosed in the above limitation reads on the encryption key Manson teaches. Further, the entire limitation itself reads on the encryption process Manson

teaches. The limitation as recited fails to patentably distinguish from Manson's teachings of using an encryption key to encrypt data obtained from the host computer, therefore claim 3 fails to patentably distinguish from Manson's invention.

Claim 4:

Manson further discloses wherein reading and replacing are performed by relevant logic circuits (Fig 1 and 4-6).

Claim 5:

Manson further discloses wherein the interface port is an Advanced Technology Attachment (ATA) port (col 3, lines 63-65). Manson does not explicitly disclose the port can also be a Small Computer System Interface (SCSI) port. However, SCSI ports were well known standard 16-bit interfaces to peripheral devices from a computer at the time the applicant's invention was made. It would have been obvious to have the interface port be either ATA or SCSI. One of ordinary skill would have been motivated to have a SCSI interface, as it was also a standard interface adopted by the American National Standards Institute (ANSI).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ponnoreay Pich whose telephone number is 571-272-7962. The examiner can normally be reached on 8:00am-4:30pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PP

Primary Examiner
Art Unit 2135